

ABSTRACT OF THE DISCLOSURE

A VoIP call control apparatus in a PBX (Private Branch eXchange) and a method thereof is capable of an effective charge management by differentiating bandwidth allocation according to a service level. The VoIP call control apparatus in a PBX includes: a service class decision unit for receiving a VoIP call service request from a subscriber, deciding a service class, and outputting the service class; a service level decision unit for measuring a service level of a VoIP trunk and outputting the service level; a C/O matching unit for matching a PSTN network and the PBX; a VoIP gateway for performing a protocol matching process with respect to an outgoing call from the PBX, and providing a voice call conforming to VoIP protocol; a G/W matching unit for matching the VoIP gateway and the PBX; and a signal processing unit for deciding whether the VoIP call with the service class transmitted from the service decision unit can be serviced in the service level of the VoIP trunk transmitted from the service level decision unit, and if the VoIP call is serviceable, providing a VoIP call service through the G/W matching unit and the VoIP gateway, and if the VoIP call is not serviceable, providing a voice call service over the PSTN network via the C/O matching unit.